

 **PIONEER®**

Service Manual

**CIRCUIT & MECHANISM
DESCRIPTIONS
REPAIR & ADJUSTMENTS**



**ORDER NO.
ARP-767-O**

STEREO TURNTABLE

PL-560(BK)

PL-560

- PL-560[BK] is Black versions of PL-560
- Models PL-560 come in four versions distinguished as follows:

Type	Applicable model		Power equipment	Destination
	PL-560 [BK]	PL-560		
KU	<input type="radio"/>	<input type="radio"/>	AC 120V only	U.S.A. model
R	<input type="radio"/>	<input type="radio"/>	AC 110V ~ 120V, AC 220V ~ 240V (Switchable)	General export model
WEM	<input type="radio"/>	<input type="radio"/>	AC 220V ~ 240V	European continent model
WB	<input type="radio"/>	<input type="radio"/>	AC 220V ~ 240V	United Kingdom model

- This service manual is applicable to the PL-560/KU, R, WEM, WB types.
- Both models PL-560 [BK] and PL-560 have the same basic mechanism and performance. The only difference is in appearance.
- For servicing the PL-560/R, WEM, WB types. Please see page 25 ~ 28.
- Ce manuel d'instruction se réfère au mode de réglage, en français.
- Este manual de servicio trata del método de ajuste escrito en español.

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1. SPECIFICATIONS

Motor and Turntable

Drive System	Belt-drive
Motor	DC servo motor
Turntable Platter	304 mm diam. aluminum alloy die-cast
Speeds	33-1/3 and 45 rpm
Wow and Flutter	Less than 0.05% (WRMS) ± 0.07% WTD Peak (DIN)
Signal-to-Noise-Ratio	More than 68 dB (DIN-B) (with Pioneer cartridge model PC-290T)

Tonearm

Type	Integrated straight tonearm
Effective Arm Length	221 mm

PC-290T Specifications

Type	IM type
Stylus	0.6 mil diamond (PN-290T)
Output Voltage	2.5 mV (1 kHz, 5 cm/s LAT. Peak)
Tracking Force	1.0 g to 1.5 g (proper 1.25 g)
Frequency Response	10 to 30,000 Hz
Recommended Load	50 kΩ
Weight	6 g

Subfunctions

Auto lead-in, auto return, auto cut, arm elevation, manual play quick play, free stop hinges.

Miscellaneous

Power Requirements	
WEM, WB models	AC 220 V — 240 V~ 50, 60 Hz
KU model	AC 120 V, 60 Hz
R model	110 V — 120 V/220 V — 240 V (switchable), 50/60 Hz
Power Consumption	
WEM, WB models	2 W
KU model	2 W
R model	2 W
Dimensions	420 (W) x 108 (H) x 374 (D) mm 16-1/2 (W) x 4-1/4 (H) x 14-3/4 (D) in.
Weight	3.9 kg/8 lb 10 oz

Accessories

EP Adapter	1
Operating Instructions	1

NOTE:

Specifications and design subject to possible modification without notice, due to improvements.

QUESTIONNAIRE

MODEL _____

One Model per questionnaire

Dear Servicer,

Thank you for your cooperation in the post-sale service of Pioneer products.

This questionnaire is used as a tool to improve the serviceability of our products and service manuals. Please evaluate this model and service manual by answering the following questions. Your ideas may be realized in our future products. Your answers will be appreciated. Thank you.

PIONEER ELECTRONIC CORP.

T. Nakagawa, Manager, Service Section, International Division

1. SERVICING EVALUATION	Circle applicable number:	Good	Fair	Poor		
a. Disassembly/Re-assembly:		1	2	3	*4	*5
b. Circuit Checks:		1	2	3	*4	*5
c. Replacement of Parts:		1	2	3	*4	*5
d. Adjustment (s):		1	2	3	*4	*5

* If (4) or (5) was circled, please be specific.

e. Your advice, opinion or ideas related to servicing this product.

2. SERVICE MANUAL EVALUATION

a. Circuit & Mechanism Description

b. Circuit Diagram

3. OTHER

Please describe other areas of servicing which you may find difficult.

Completed by :

Date :

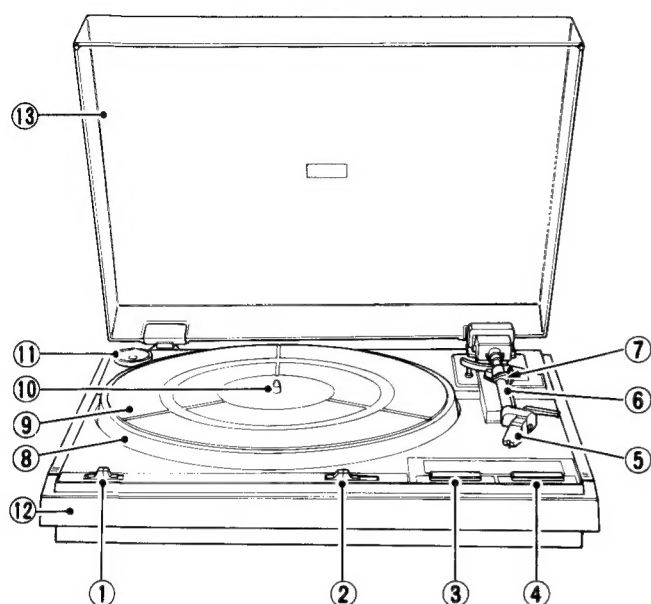
Company Name :

Address :

City/State/Zip :

Please send this form filled to the distributor in your country.

2. PANEL FACILITIES



① SPEED switch

Set this switch in accordance with the speed of the record which is to be played.

[33]: For 33-1/3 rpm records.

[45]: For 45 rpm records.

② ARM ELEVATION switch

- Use the switch for manual play.
- Use the switch to suspend record play temporarily.
- Use the switch when changing the tracks during actual play.

[UP]: The tonearm rises (the stylus moves away from the record).

[DOWN]: The tonearm descends (the stylus is lowered onto the record).

③ SIZE switch

Set this switch in accordance with the size of the record which is to be played.

[17] (depressed position): For 17 cm EPs

[30] (released position): For 30 cm LPs

④ START/STOP switch

Depress this switch when starting auto play or when stopping play.

⑤ CARTRIDGE (PC-290T)

NOTE:

A cartridge is not provided with the KUT and KCT models, so your own cartridge should be mounted, following the instructions laid down in CARTRIDGE MOUNTING.

⑥ TONEARM

⑦ ARM REST

This serves to hold and clamp the tonearm. When moving the tonearm, release the clamp.

⑧ PLATTER

⑨ RUBBER MAT

⑩ PLATTER SHAFT

⑪ EP ADAPTER


This is used when playing records with a large center hole.

⑫ CABINET

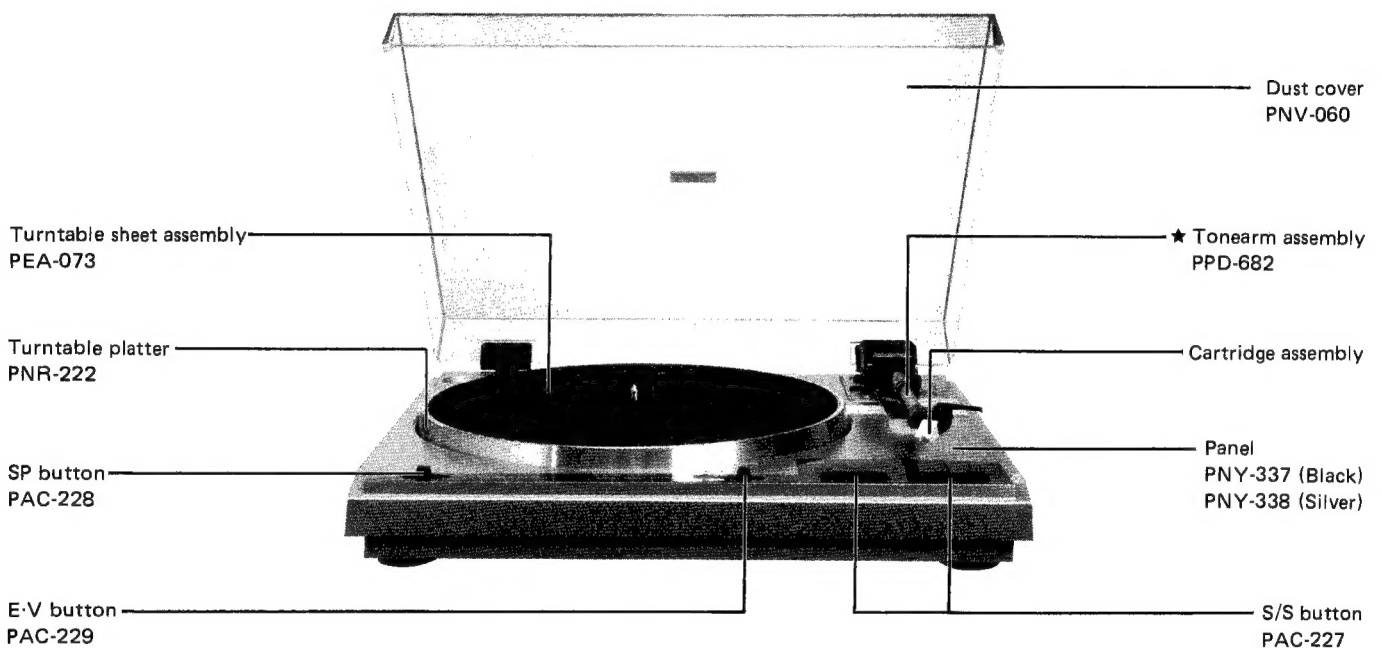
⑬ DUST COVER

3. PARTS LOCATION

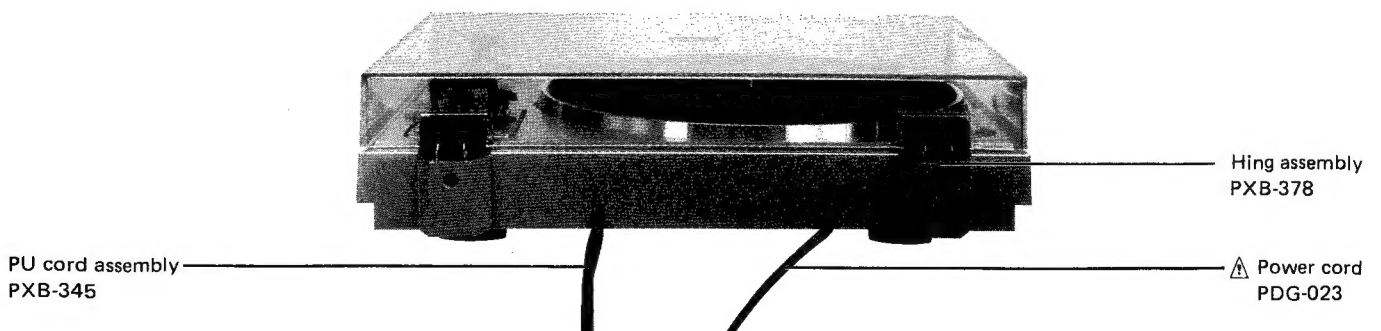
NOTES:

- The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★
 ★★ **GENERALLY MOVES FASTER THAN** ★
 This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

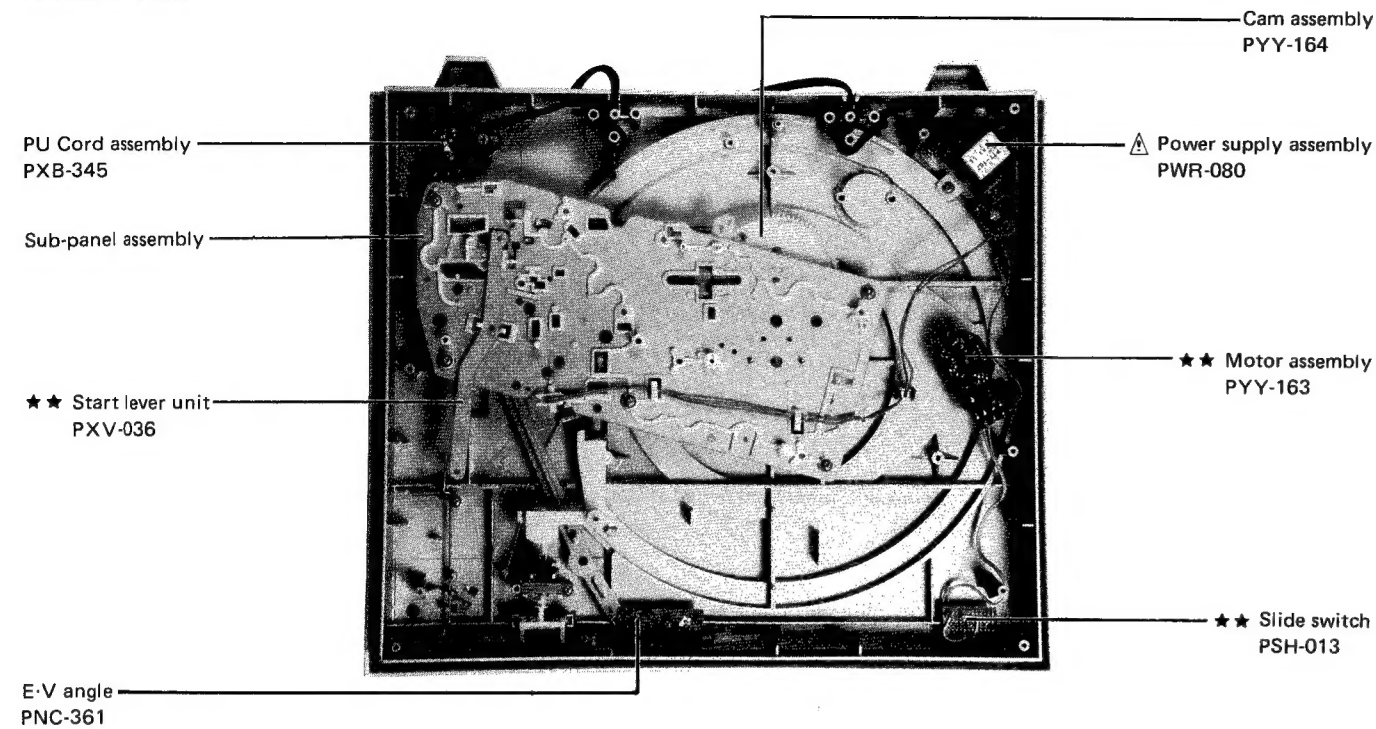
Front View



Rear View



Bottom View



4. DISASSEMBLY

● Mechanism Assembly and Motor

1. Turn on the turntable and free the mechanism.
 2. Fasten the tone arm to the arm rest.
 3. Remove the rubber sheet and turntable.
 4. Close the player hood and turn the player upside down and place it on a soft cloth so that the player hood is not damaged.
 5. Remove the eleven screws ①, and remove the under base.
 6. Remove five screws ② and two screw ③.
 7. Disconnect connectors A.
- The mechanism assembly can be removed from the panel.
8. Remove the two screws ④, and remove the motor.

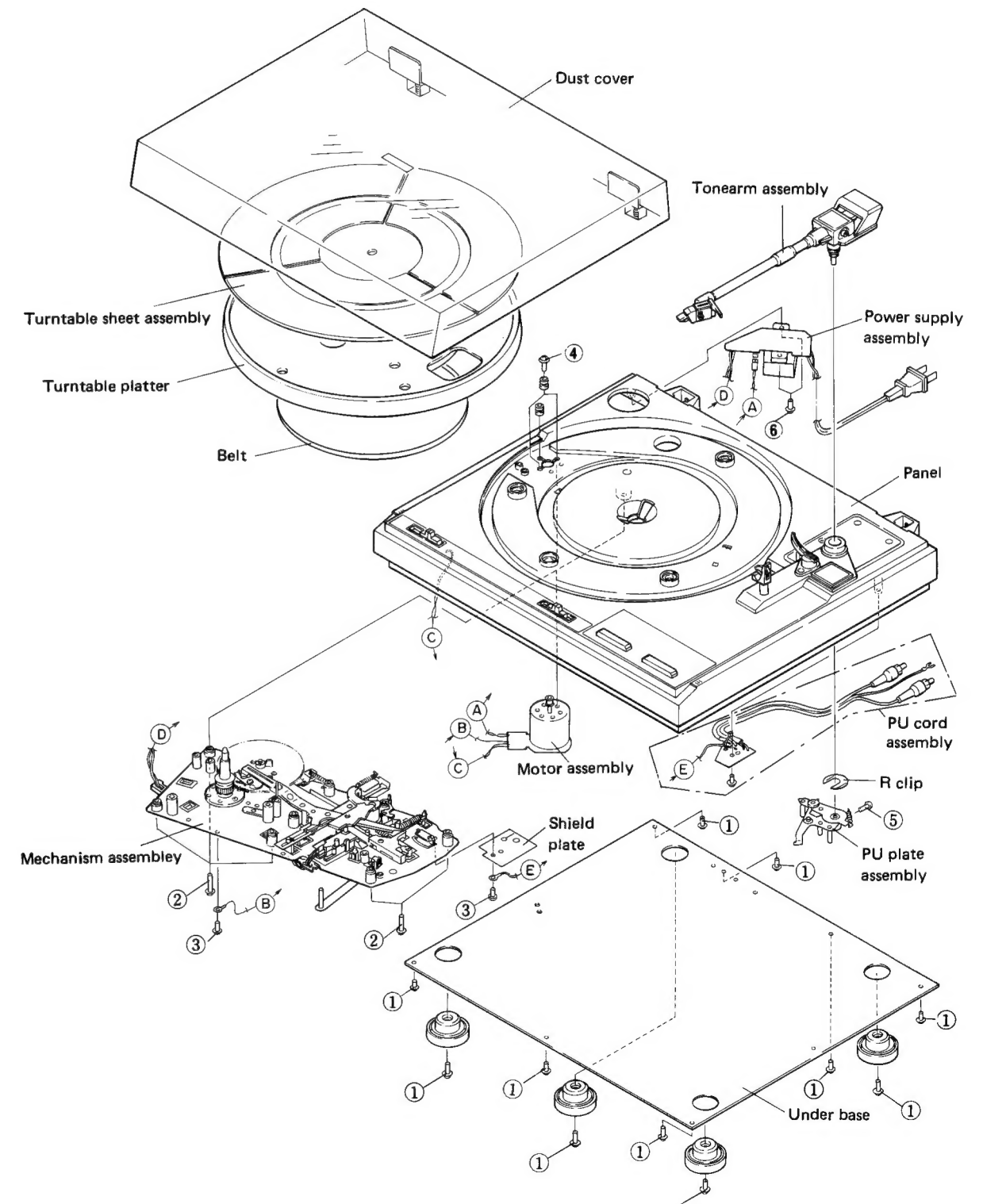
● Tone Arm

1. Remove the mechanism assembly from the panel.
2. Using a soldering iron, disconnect the PU lead wires (arm lead wires) from the PU P.C. board.
3. Remove the PU plate assembly AS spring.
4. Remove the one screw ⑤, and remove the PU plate assembly from the tone arm.
5. Remove the R clip.
6. Turn the player onto its side, remove the arm reset clamp, and remove the tone arm from the panel.

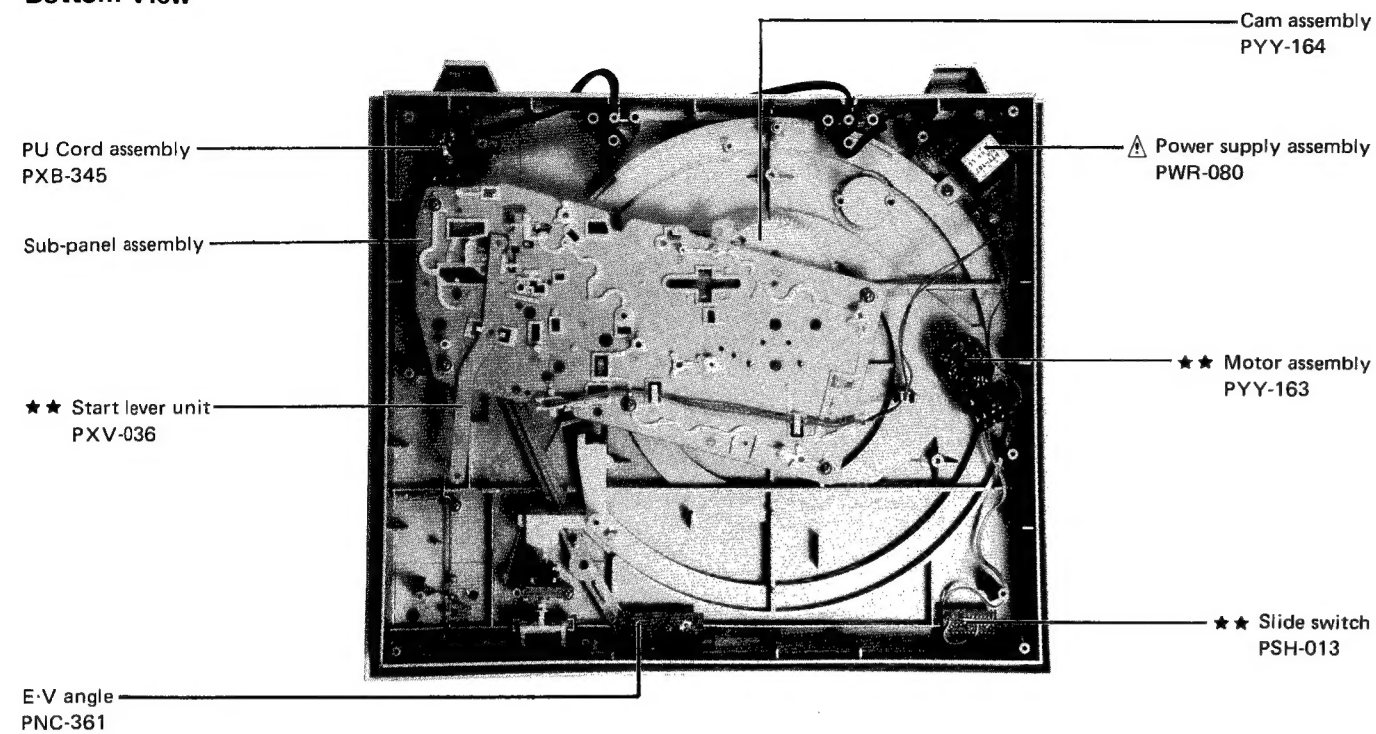
● Power Supply Assembly

- Remove the two screws ⑥.

See pages 21 to 24 for the parts installation and assembly precautions.



Bottom View



4. DISASSEMBLY

● Mechanism Assembly and Motor

1. Turn on the turntable and free the mechanism.
 2. Fasten the tone arm to the arm rest.
 3. Remove the rubber sheet and turntable.
 4. Close the player hood and turn the player upside down and place it on a soft cloth so that the player hood is not damaged.
 5. Remove the eleven screws ①, and remove the under base.
 6. Remove five screws ② and two screw ③.
 7. Disconnect connectors A.
- The mechanism assembly can be removed from the panel.
8. Remove the two screws ④, and remove the motor.

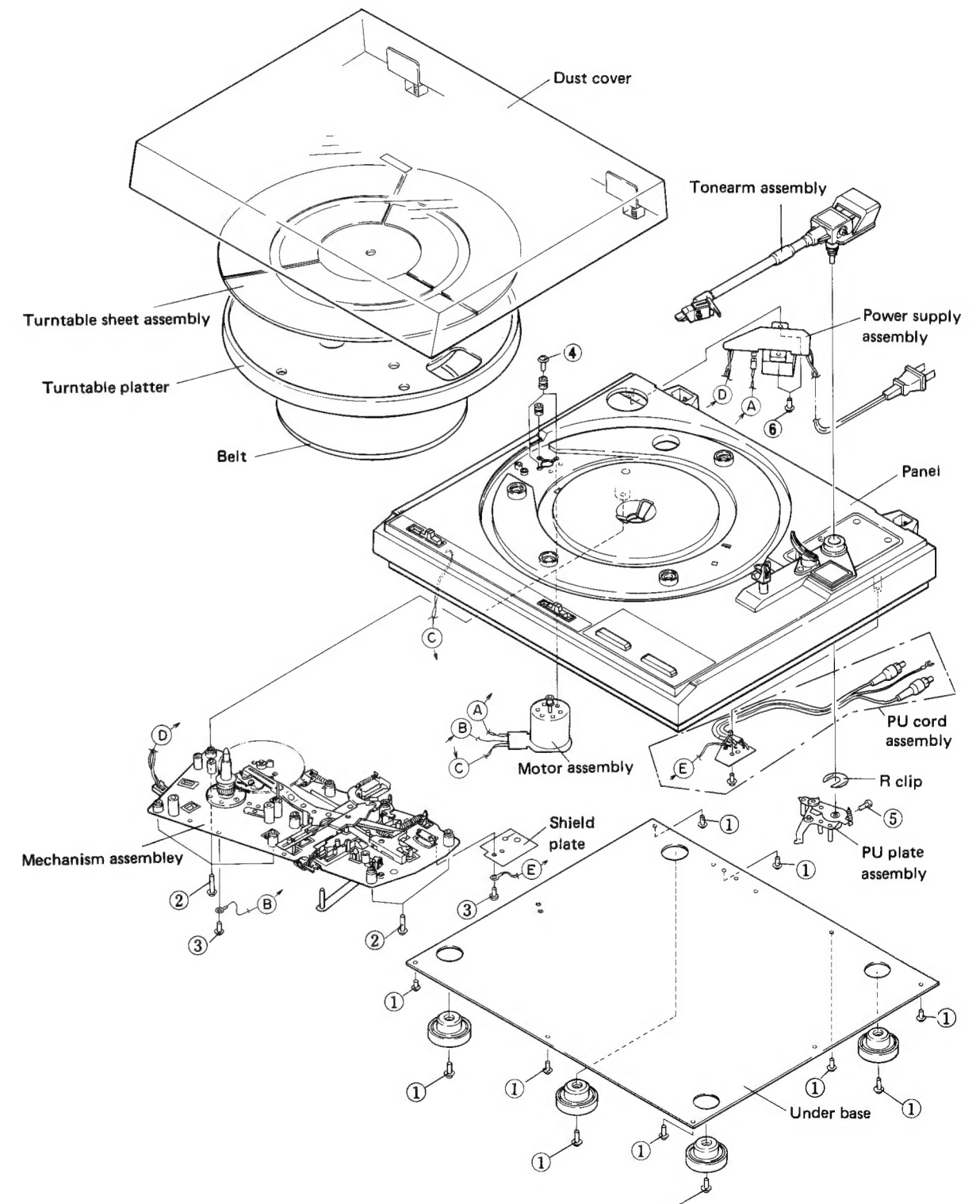
See pages 21 to 24 for the parts installation and assembly precautions.

● Tone Arm

1. Remove the mechanism assembly from the panel.
2. Using a soldering iron, disconnect the PU lead wires (arm lead wires) from the PU P.C. board.
3. Remove the PU plate assembly AS spring.
4. Remove the one screw ⑤, and remove the PU plate assembly from the tone arm.
5. Remove the R clip.
6. Turn the player onto its side, remove the arm reset clamp, and remove the tone arm from the panel.

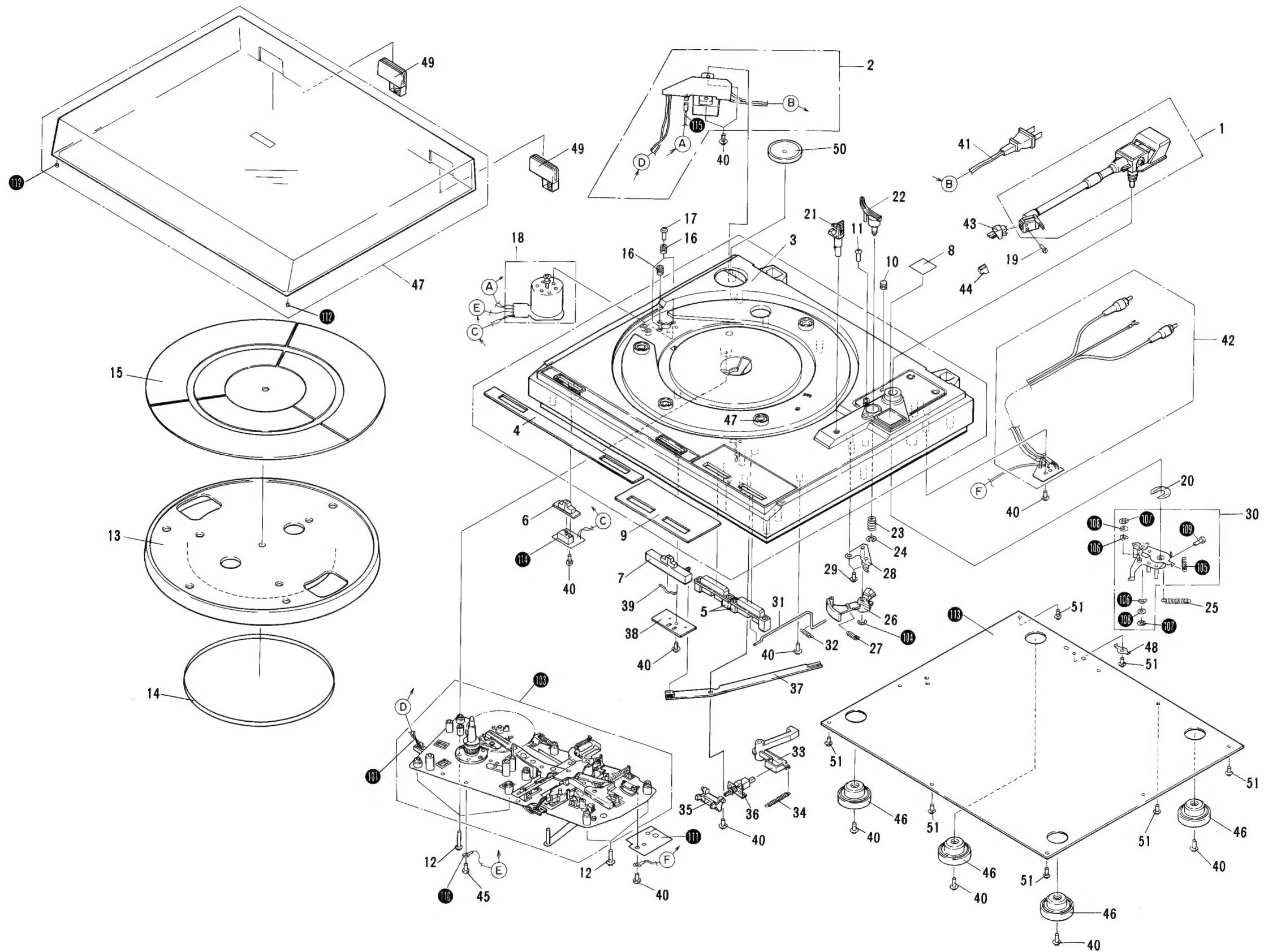
● Power Supply Assembly

- Remove the two screws ⑥.



5. EXPLODED VIEW

5.1 EXTERIOR



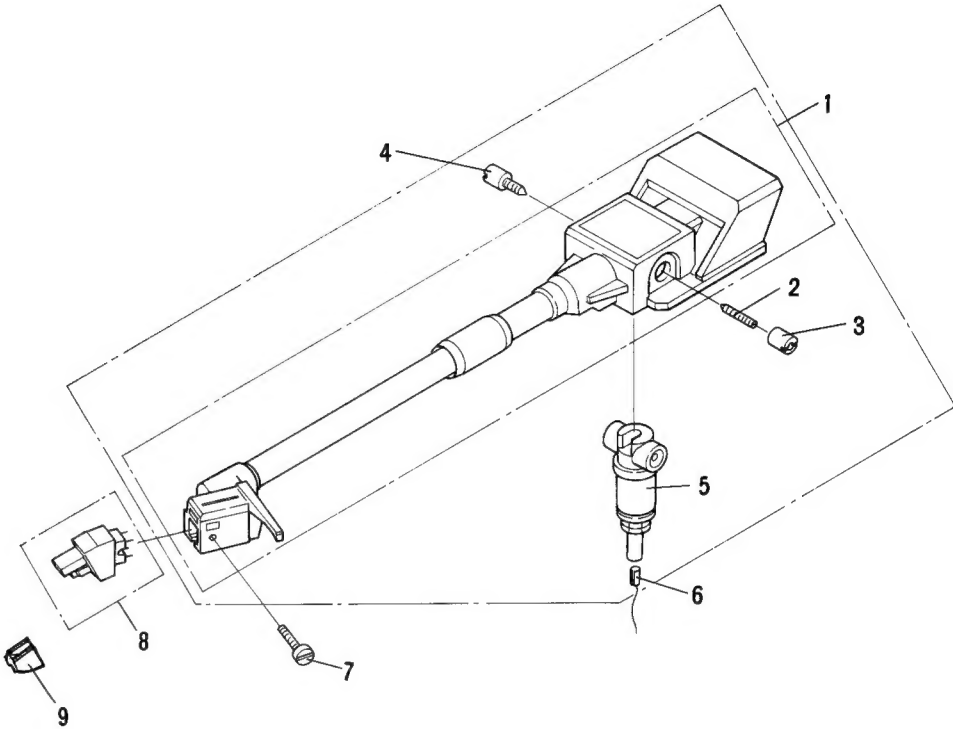
Parts List

NOTES:

- Parts without part number cannot be supplied.
 - The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
 - For your Parts Stock Control, the fast moving items are indicated with the marks ★★ and ★ .
- ★★ GENERALLY MOVES FASTER THAN ★
- This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
⚠	★ 1.	PPD-682	Tonearm assembly	★★	35.	PNX-292	Switch lever (B)
	2.	PWR-080	Power supply assembly		36.	PSG-047	Push switch
	3.	PNY-337	Panel (Black)		37.	PNC-360	EV lever
		PNY-338	Panel (Silver)		38.	PNC-361	EV angle
	4.	PAM-145	Screen (F)		39.	PNC-362	Button spring
	5.	PAC-227	S/S button	⚠	40.	IPC30P100FMC	Screw (3 x 10)
	6.	PAC-228	SP button		41.	PDG-023	Power cord
	7.	PAC-229	E·V button		42.	PXB-345	PU cord assembly
	8.	PAN-066	AS bord		43.	PXV-961	Cartridge (without stylus)
	9.	PAM-151	BF screen		44.	PNX-981	Stylus cover
	10.	PEB-114	Rubber bush		45.	PSZ30P060FMC	Screw (3 x 6)
	11.	BPZ26P120FZK	Screw (2.6 x 12)		46.	PEB-251	Insulator
	12.	IPC30P290FMC	Screw (3 x 29)		47.	PNV-060	Dust cover
	13.	PNR-222	Turntable platter		48.	PNC-363	Fixer
★★	14.	PEB-296	Belt	★	49.	PXB-378	Hinge assembly
		(PEB-224)			50.	N93-603	45 adaptor
	15.	PEA-073	Turntable sheet assembly		51.	IPC30P100FMC	Screw (3 x 10)
	16.	PEB-172	Transformer base rubber		101.		Lead wire assembly
	17.	PBA-112	Screw		102.		.....
★★	18.	PYY-163	Motor assembly		103.		Sub-panel assembly
	19.	PBA-170	Screw		104.		Washer
					105.		PU plate spring
	20.	PBK-059	R clip		106.		PU spring washer
★	21.	PXB-396	Arm rest assembly		107.		Washer
	22.	PXB-374	Elevation sheet assembly		108.		Washer
	23.	PBH-293	E·V spring		109.		Screw
	24.	PBF-020	Polyslider washer		110.		Ground lead unit
	25.	PBH-425	AS spring		111.		Shield plate
	26.	PNY-335	Elevation cam		112.		Rubber foot
	27.	PBH-238	Elevation cam spring		113.		Bottom plate
	28.	PXT-462	EV bord spring unit (B)		114.		Switch board assembly
	29.	PPZ30P080FMC	Screw (3 x 8)		115.		Connector assembly
	30.	PXB-323	PU plate assembly				
	31.	PBH-419	S/S rod				
	32.	PBH-339	Power lever spring				
	33.	PNY-336	Size lever				
	34.	PBH-368	S/S rod spring				

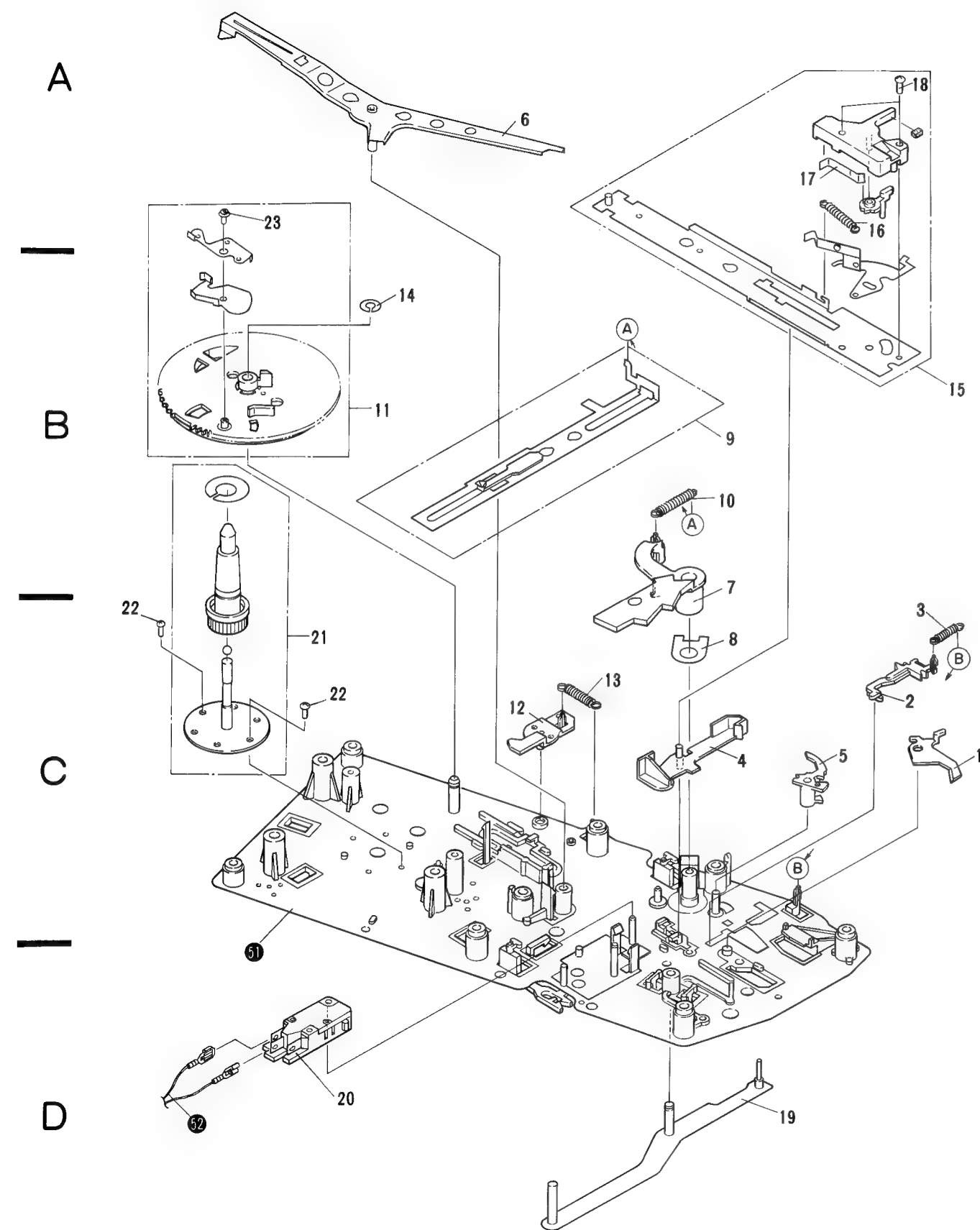
5.2 TONE ARM ASSEMBLY



Parts List of Tone Arm Assembly (PPD-682)

Mark	No.	Part No.	Description
	1.	PXB-623	Pipe holder assembly
	2.	PLA-580	Pivot
	3.	PLB-718	Pivot lock nut
	4.	PLB-727	Pivot screw
	5.	PXB-624	Inside holder assembly
	6.	PDF-514	Ground lug unit
	7.	PBA-170	Screw
	8.	PXV-961	Cartridge (without stylus)
	9.	PNX-981	Stylus cover

5.3 MECHANISM SECTION (SUB-PANEL ASSEMBLY)



NOTES:

- Parts without part number cannot be supplied.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your Parts Stock Control, the fast moving items are indicated with the marks $\star\star$ and \star .
 $\star\star$ GENERALLY MOVES FASTER THAN \star
This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

Parts List of Mechanism Section (Sub-Panel Assembly)

Mark	No.	Part No.	Description	Mark	No.	Part No.	Description
	1.	PNX-028	Reset plate		16.	PBH-224	Start plate spring
	2.	PNY-140	Selector		17.	PBK-038	Click board spring
	3.	PBH-394	Reset plate spring		18.	PMZ26P100FMC	Screw (2.6 x 8)
★ ★	4.	PNX-030	Switch lever	★ ★	19.	PXV-036	Start lever unit
★ ★	5.	PNY-141	Switch locker	Δ ★ ★	20.	PSF-023	Microswitch (POWER)
★ ★	6.	PXT-446	Detector lever unit		21.	PXB-443	Shaft assembly
	7.	PNY-138	Index cam		22.	PDZ30P080FMC	Screw (3 x 8)
	8.	PBK-039	Spring washer		23.	PBA-126	Screw (2.6 x 8)
★ ★	9.	PXV-060	Select lever unit		51.		Sub-Panel unit
	10.	PBH-393	Select lever spring		52.		Lead wire assembly
	11.	PYY-164	Cam assembly				
	12.	PNY-139	Lock plate				
	13.	PBH-392	Lock plate spring				
	14.	PBH-018	Polyslider washer				
	15.	PXB-376	Drive board assembly				

6. ELECTRICAL PARTS LIST

NOTES:


- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%).

560Ω	56 × 10 ¹	561	RD4PS	561 J
47kΩ	47 × 10 ³	473	RD4PS	473 J
0.5Ω	0R5		RN2H	0R5 K
1Ω	010		RS1P	010 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62kΩ	562 × 10 ¹	5621	RN4SR	5621 F
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- The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- For your Parts Stock Control, the fast moving items are indicated with the marks **★★** and **★**.
★★ GENERALLY MOVES FASTER THAN ★
This classification shall be adjusted by each distributor because it depends on model number, temperature, humidity, etc.

MISCELLANEOUS PARTS


P.C. BOARD ASSEMBLY

Mark	Symbol & Description	Part No.
	Power supply assembly	PWR-080
	Switch board assembly	NO supply

Power Supply Assembly (PWR-080)

Mark	Symbol & Description	Part No.
★	D1	DSA1A1
 ★	Power transformer (AC 120V)	PTT-167
	C2	CEA221M25L
	C1	CKDYF103Z50

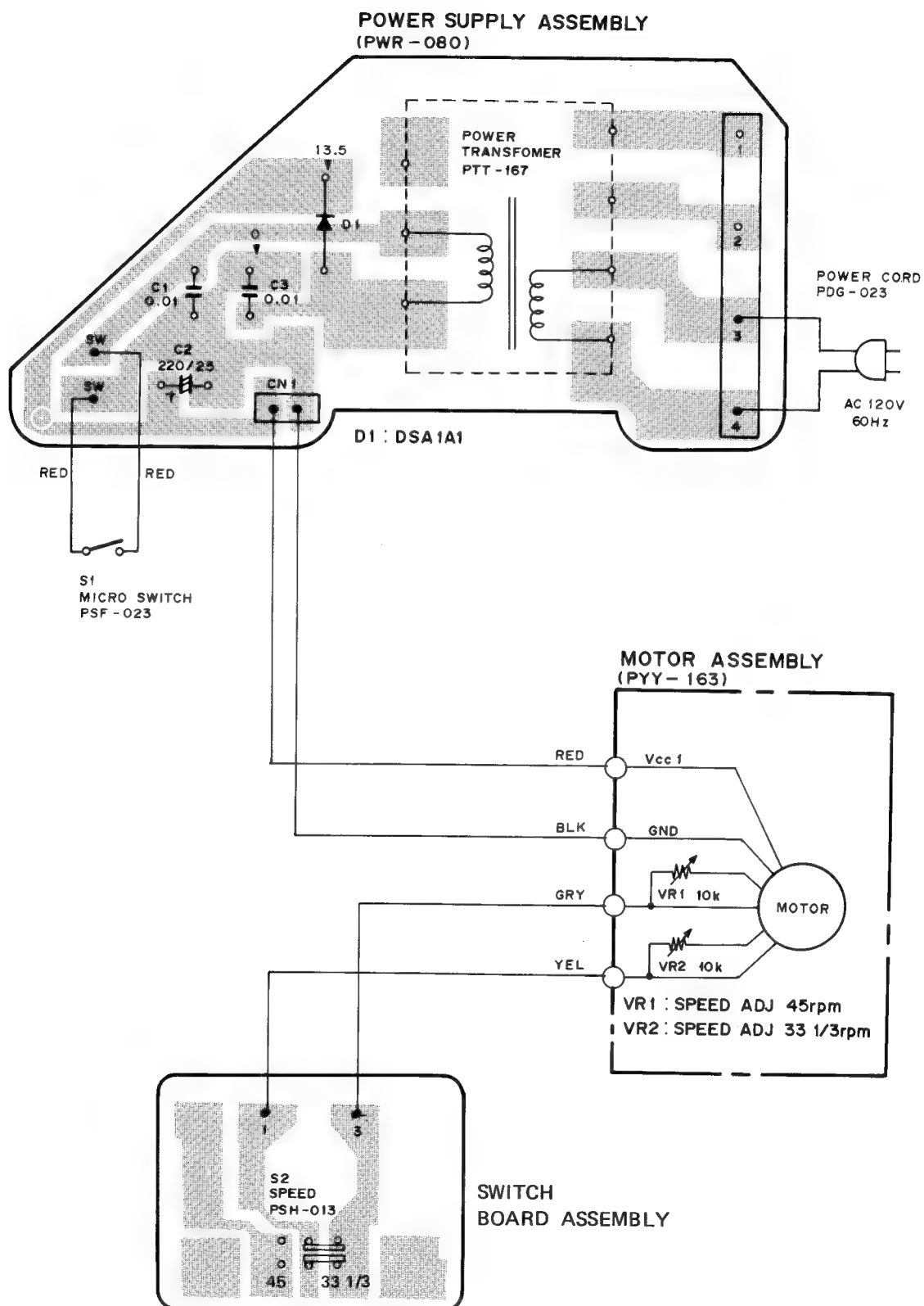
OTHERS

Mark	Symbol & Description	Part No.
★★	Motor assembly	PYY-163
★★ S1	Microswitch (POWER)	PSF-023
	Power cord	PDG-023
	PU cord assembly	PXB-345

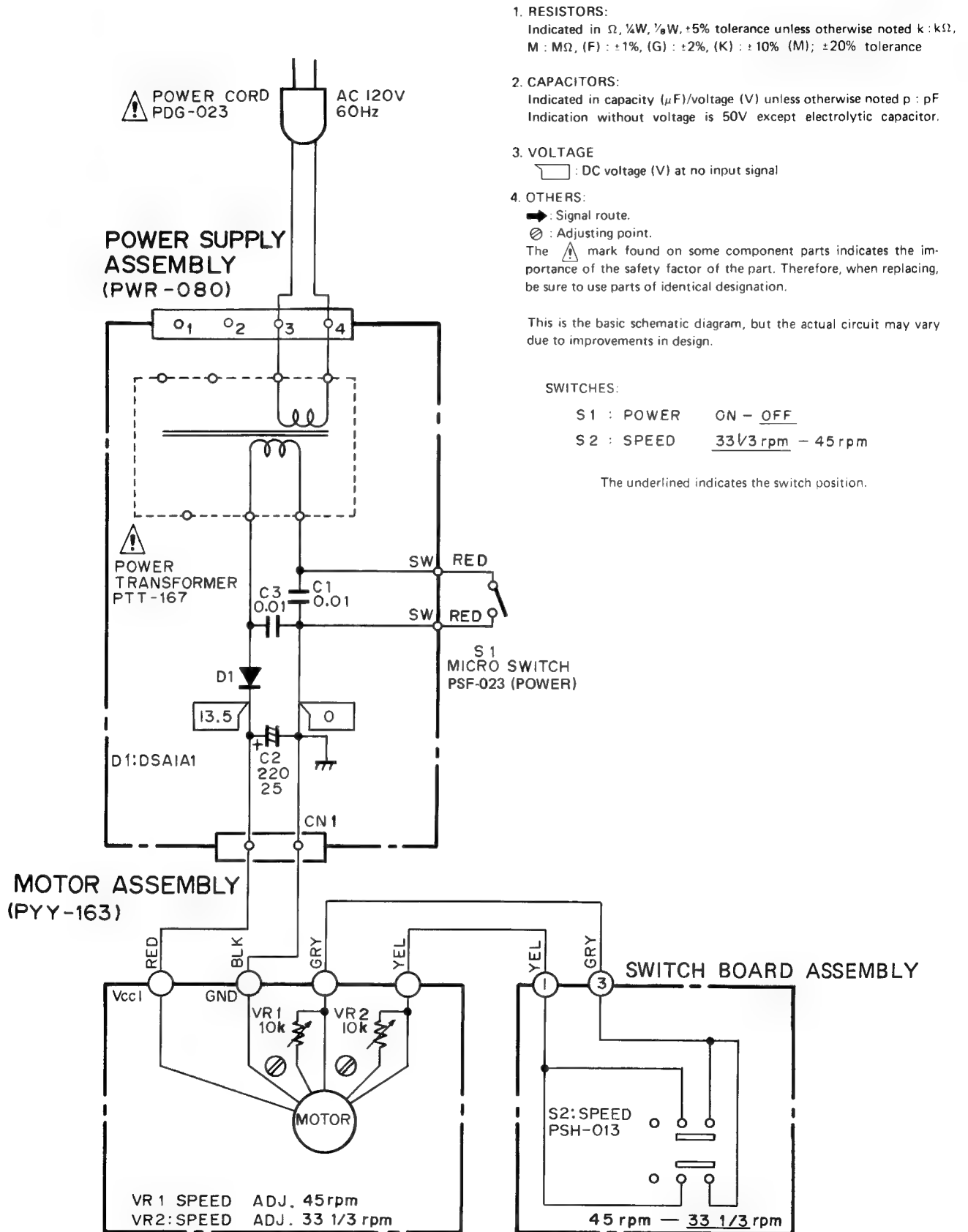
Switch board assembly

Mark	Symbol & Description	Part No.
★★ S2	Push switch (SPEED)	PSH-013

7. P.C. BOARDS CONNECTION DIAGRAM



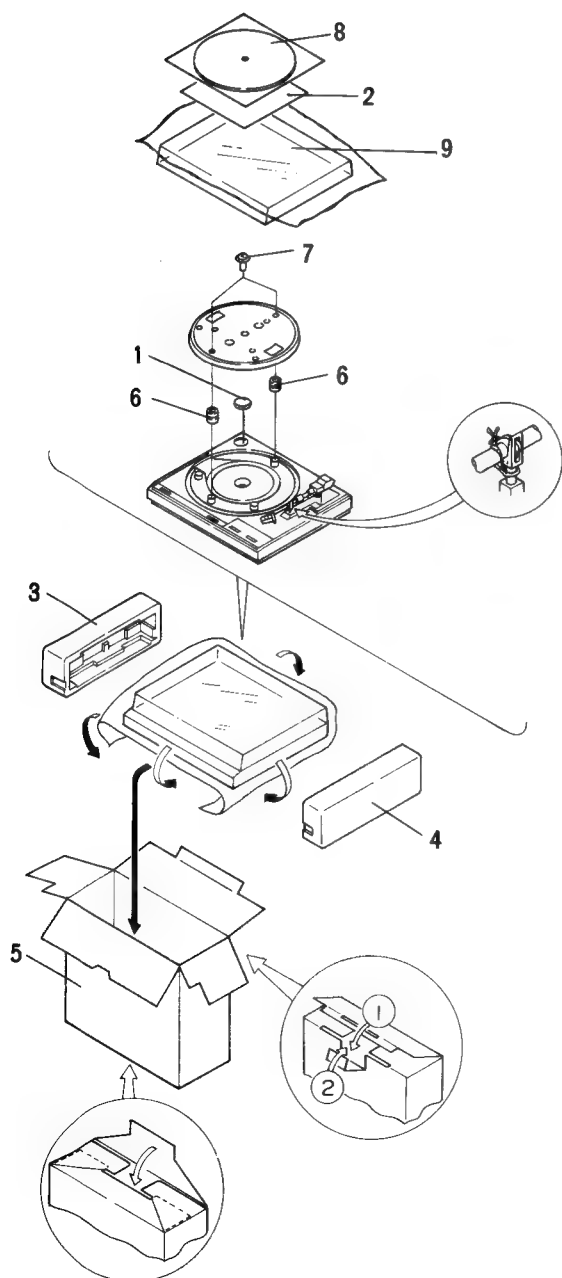
8. SCHEMATIC DIAGRAM



9. PACKING

Parts List

Mark	No.	Part No.	Description
	1.	N93-603	45 adaptor
	2.	PRB-281	Operating instructions (English)
	3.	PHA-175	Protector (L)
	4.	PHA-176	Protector (R)
	5.	PHH-221	Packing case (Black)
		PHH-242	Packing case (Silver)
	6.	PNY-198	Packing
	7.	PBA-178	Screw
	8.	PEA-073	Turntable sheet assembly
	9.	PNV-060	Dust cover



10. ADJUSTMENTS

10.1 AUTO-RETURN ADJUSTMENT

• Auto-Return Position Adjustment

When auto-return occurs too early or too late, make the following adjustments.

1. Check the stylus landing position. If the stylus does not land at the correct position, adjust the landing position.
2. Set the arm elevation switch to UP and turn the auto-return adjustment screw fully counter-clockwise.
3. Move the tone arm as far as it will go toward the inside.
4. When the auto-return adjustment screws is turned slowly clockwise, the tone arm will begin to move toward the inside.
5. Stop turning the adjustment screw at the point at which there is a space of 32 mm between the cartridge stylus and the center shaft. (Fig. 10-1)
6. After adjustment, check if auto-return is performed correctly and that the stylus landing position is correct.

10.2 MECHANISM ADJUSTMENT

• Stylus Landing Position Adjustment

When the tone arm doesn't land in the correct position during automatic playback, adjust according to the following procedure.

1. Place a 30 cm record on the platter.
2. Press the START/STOP switch and start automatic playback. Note the direction and amount if the landing point is off. (How many mm to the inside or outside from the record grooves.)
3. Depress the START/STOP switch to return the tone arm to its rest.
4. Press the arm elevation switch to raise the stylus.
5. Move the tone arm to the outside edge of the record by hand.
6. Turn the adjustment screw with a small screwdriver according to the direction and amount checked at item 2 as follows:
 - When the stylus lands at the outside of the record, turn the adjustment screw in the \odot direction.
 - When the stylus lands at the inside of the record, turn the adjustment screw in the \ominus direction.

One half turn of the adjustment screws moves the tone arm about 12 mm.

7. After adjustment, press the PLAY/STOP switch and check if the stylus landing point was correctly adjusted.

If adjustment is incorrect, repeat items 3 to 6.

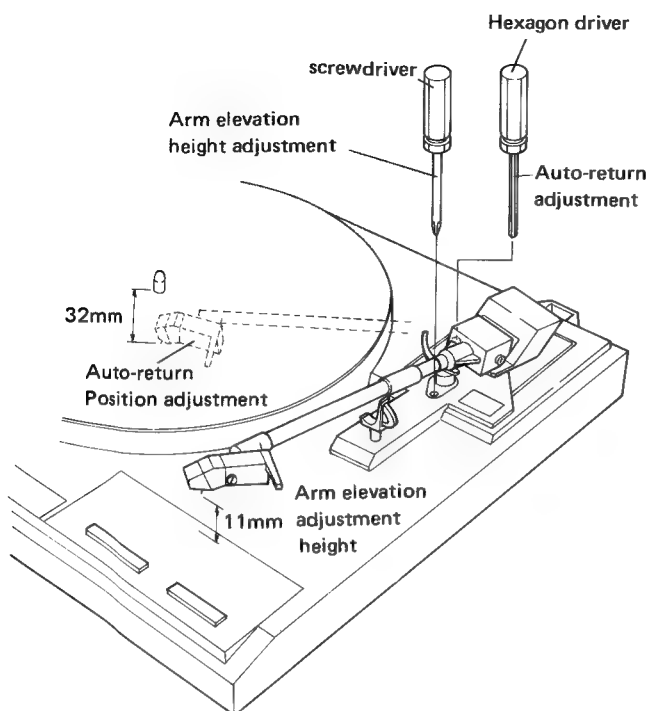


Fig. 10-1 Arm elevation height adjustment and auto-return adjustment

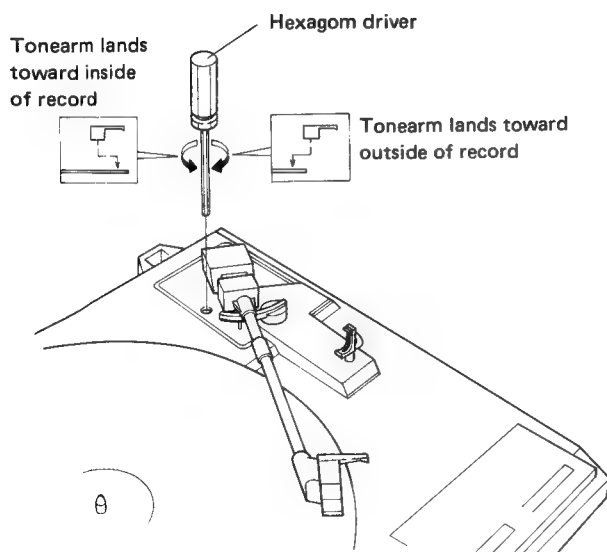


Fig. 10-2 Stylus landing point adjustment

10.3 ARM-ELEVATION ADJUSTMENT

• Arm Elevation Height Adjustment

1. Depress the arm elevation switch to lower the arm.
2. Adjust the screw under the turntable so the stylus is 11 mm above the panel. When the adjustment screw is turned counterclockwise, the stylus rises.
3. Depress the arm elevation switch to raise the tone arm.
4. Adjust the screws next to the arm elevation switch so the stylus is 25.5 mm above the panel.

10.4 MOTOR ADJUSTMENTS

Place the record player on blocks as shown in Fig. 10.3 and adjust the motor from the under base.

1. Push the arm elevation switch to raise the arm.
2. Place a strobo sheet on the turntable, move the arm to the turntable side, and rotate the turntable.
3. Adjust semifixed resistors VR1 and VR2 of the motor assembly so the strobo of the strobo sheet appears to the static.
4. For 33 1/3 rpm, adjust VR2 and for 45 rpm, adjust VR1.

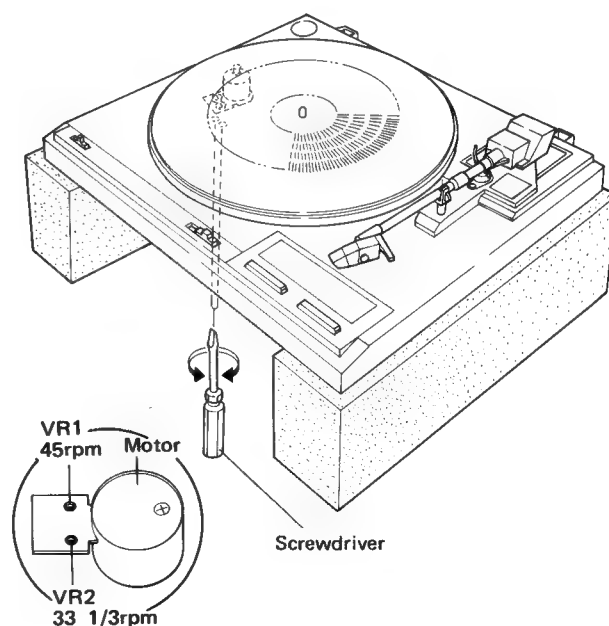


Fig. 10-3 Motor adjustment

10. RÉGLAGE

10.1 REGLAGE DU RETOUR AUTOMATIQUE

● Réglage de la Position du Retour Automatique

Exécuter les réglages suivants au cas où le retour automatique s'effectue trop tôt ou trop tard.

1. Vérifier la position de descente de la pointe de lecture. Si celle-ci ne se pose pas sur la position correcte, régler la position de descente.
2. Placer l'interrupteur d'élévation du bras acoustique sur la position "UP" (vers le haut), et tourner la vis de réglage de retour automatique complètement dans le sens contraire des aiguilles d'une montre.
3. Déplacer le bras acoustique vers l'intérieur autant que possible.
4. Le bras acoustique se déplacera vers l'intérieur lorsque la vis de réglage du retour automatique est tournée lentement dans le sens des aiguilles d'une montre.
5. Interrompre la rotation de la vis de réglage sur le point où on obtient un écartement de 32 mm entre la pointe de la tête de lecture et l'axe central. (Fig.10-1).
6. Après le réglage, vérifier si le retour automatique s'effectue correctement et si la position de descente de la pointe de lecture est appropriée.

10.2 REGLAGE DU MECANISME

● Réglage de la Position de Descente de la Pointe de Lecture

Au cas où le bras acoustique ne se pose pas sur la position appropriée au cours de la lecture automatique, régler conformément au procédé suivant:

1. Placer un disque de 30 cm sur le plateau.
2. Presser l'interrupteur START/STOP (départ/arrêt) et effectuer la lecture automatique. Noter la direction et la quantité si le point de descente est décentré. (Distance en mm vers l'intérieur ou l'extérieur à partir des sillons du disque).
3. Presser l'interrupteur START/STOP pour ramener le bras acoustique sur son support.
4. Presser l'interrupteur d'élévation du bras acoustique pour soulever la pointe de lecture.
5. Déplacer manuellement le bras acoustique jusqu'au bord extérieur du disque.
6. Tourner la vis de réglage au moyen d'un petit tournevis conformément à la direction et la quantité vérifiées à l'étape 2 mentionnée ci-dessus, de la manière suivante:
 - Tourner la vis de réglage dans le sens \curvearrowright au cas où la pointe de lecture se pose en dehors du disque.

- Tourner la vis de réglage dans le sens \curvearrowleft au cas où la pointe de lecture se pose à l'intérieur du disque.

Un demi-tour de la vis de réglage déplacera le bras acoustique d'environ 12 mm.

7. Après le réglage, presser l'interrupteur PLAY/STOP (lecture/arrêt), et vérifier si le point de descente de la pointe de lecture a été réglé correctement. Au cas où le réglage n'est pas correct, répéter les étapes 3 à 6.

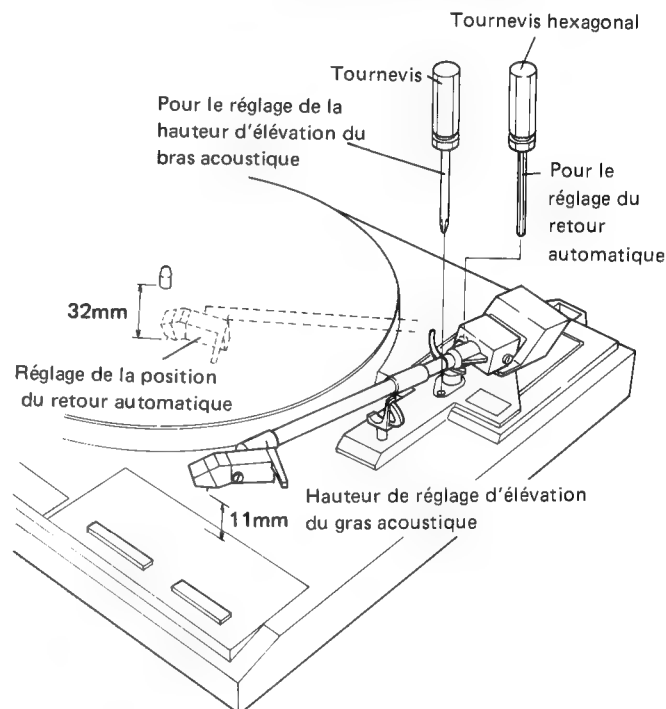


Fig. 10-1 Réglages de la hauteur d'élévation du bras acoustique et du retour automatique

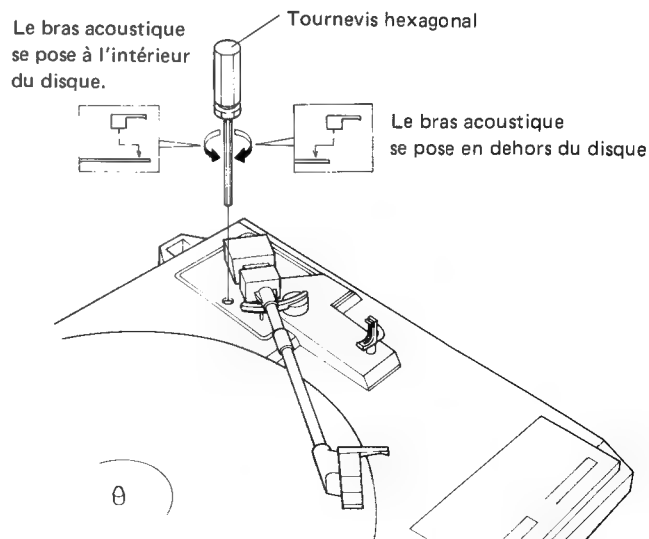


Fig. 10-2 Réglage du point de descente de la pointe de lecture

10.3 REGLAGE DE L'ELEVATION DU BRAS ACOUSTIQUE

● Réglage de la Hauteur D'élévation du Bras Acoustique

1. Presser l'interrupteur d'élévation du bras acoustique pour abaisser le bras acoustique.
2. Régler la vis en dessous de la platine de lecture de telle manière que la hauteur de la pointe de lecture soit de 11 mm au-dessus du panneau. La pointe de lecture se lève lorsque l'on tourne la vis de réglage dans le sens contraire des aiguilles d'une montre.
3. Presser l'interrupteur d'élévation du bras acoustique pour soulever le bras acoustique.
4. Régler les vis du côté de l'interrupteur d'élévation du bras acoustique de telle manière que la hauteur de la pointe de lecture soit de 25,5 mm au-dessus du panneau.

10.4 REGLAGES DU MOTEUR

Placer la platine de lecture de disque sur des blocs comme illustré par la figure 10.3, et régler le moteur à partir d'en-dessous de la base.

1. Presser l'interrupteur d'élévation du bras acoustique pour soulever celui-ci.
2. Placer une feuille stroboscopique sur le plateau, déplacer le bras acoustique vers le côté du plateau, et tourner le plateau.
3. Régler les résistances semi-fixes VR1 et VR2 de l'ensemble du moteur de telle manière que le stroboscope de la feuille stroboscopique semble être fixe.
4. Régler la résistance VR2 pour 33 1/3 tours/minute, et la résistance VR1 pour 45 tours/minute.

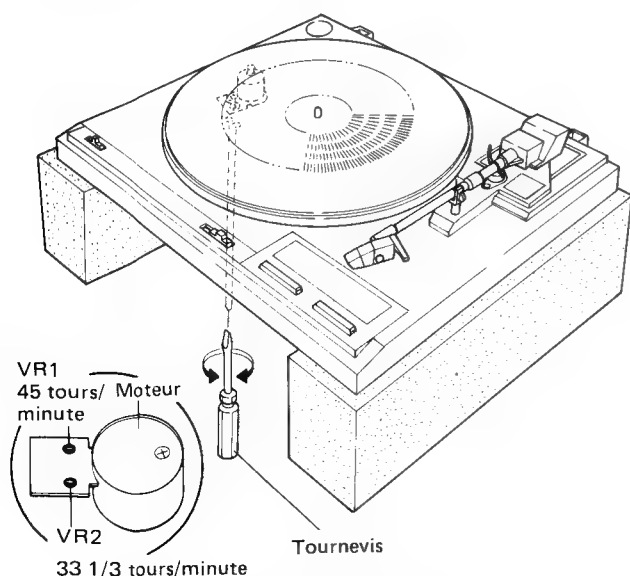


Fig. 10-3 Réglage du moteur

10. AJUSTE

10.1 AJUSTE DE REGRESO AUTOMATICO

● Ajuste de la Posición de Regreso Automático

Ejecutar los siguientes ajustes en caso de que el regreso automático ocurra muy temprano o muy tarde:

1. Verificar la posición de descanso de la aguja. Si la aguja no descansa en la posición correcta, ajustar la posición de descanso.
2. Colocar el interruptor de elevación del brazo en la posición "UP" (hacia arriba), y girar el tornillo de ajuste de regreso automático completamente en el sentido contrario al de las agujas del reloj.
3. Desplazar el brazo sonoro hacia dentro lo más lejos posible.
4. El brazo sonoro se desplazará hacia dentro cuando el tornillo de ajuste de regreso automático es girado despacio en el sentido de las agujas del reloj.
5. Interrumpir la rotación del tornillo de ajuste al punto en el cual hay un intervalo de 32 mm entre la aguja de cartucho y el eje central. (Fig. 10-1)
6. Después del ajuste, verificar si el regreso automático se ejecuta correctamente y si la posición de descanso de la aguja es apropiada.

10.2 AJUSTE DEL MECANISMO

● Ajuste de la Posición de Descanso de la Aguja

En caso de que el brazo sonoro no descansa en la posición apropiada durante la reproducción automática, ajustar de acuerdo con el procedimiento siguiente:

1. Colocar un disco de 30 cm sobre el plato.
2. Presionar el interruptor START/STOP (arranque/parado) y efectuar la reproducción automática, apuntar la dirección y la cantidad si el punto de descanso está descentrado. (Distancia en mm hacia dentro o fuera desde las ranuras del disco).
3. Presionar el interruptor START/STOP para regresar el brazo sonoro a su descanso.
4. Presionar el interruptor de elevación del brazo para levantar la aguja.
5. Desplazar manualmente el brazo sonoro hacia el borde exterior del disco.
6. Girar el tornillo de ajuste por medio de un destornillador pequeño de acuerdo con la dirección y la cantidad verificadas en el paso 2 anterior, del modo siguiente:
 - Girar el tornillo de ajuste en el sentido ↺ si la aguja descansa fuera del disco.

- Girar el tornillo de ajuste en el sentido ↻ si la aguja descansa dentro del disco.

Un medio giro del tornillo de ajuste desplazará el brazo sonoro aproximadamente 12mm.

7. Después del ajuste, presionar el interruptor PLAY/STOP (reproducción/parado), y verificar si el punto de descanso de la aguja ha sido ajustado correctamente. En caso de que el ajuste sea incorrecto, repetir los pasos 3 a 6.

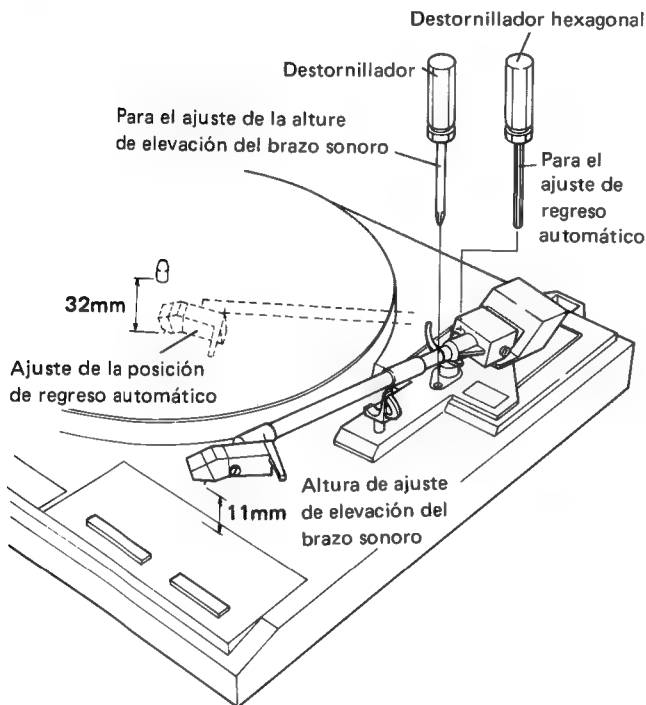


Fig. 10-1 Ajustes de la altura de elevación del brazo sonoro y de regreso automático;

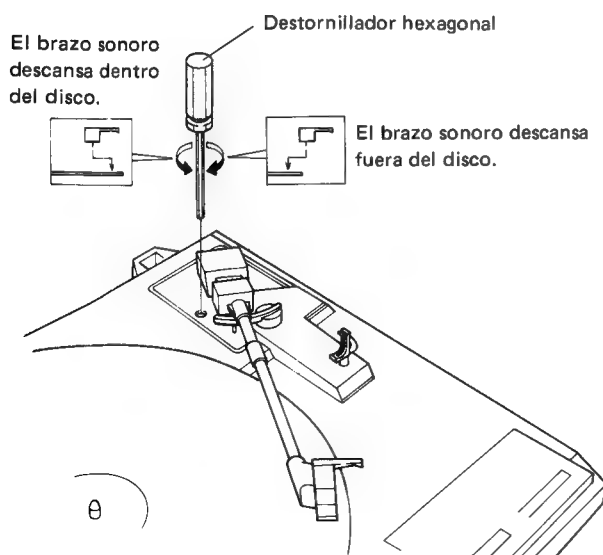


Fig. 10-2 Ajuste del punto de descanso de la aguja

10.3 AJUSTE DE LA ELEVACION DEL BRAZO SONORO

- Ajuste de la Altura de Elevación del Brazo Sonoro

1. Presionar el interruptor de elevación del brazo sonoro para bajar el brazo.
2. Ajustar el tornillo bajo el tocadiscos de modo que la altura de la aguja sea de 11 mm sobre el panel. La aguja se levanta cuando se gira el tornillo de ajuste en el sentido contrario al de las agujas del reloj.
3. Presionar el interruptor de elevación del brazo sonoro para levantar el brazo.
4. Ajustar los tornillos al lado del interruptor de elevación del brazo sonoro de modo que la altura de la aguja sea de 25.5 mm sobre el panel.

10.4 AJUSTES DEL MOTOR

Colocar el tocadiscos sobre dos bloques como se ilustra en la figura 10.3, y ajustar el motor desde la base inferior.

1. Presionar el interruptor de elevación del brazo sonoro.
2. Colocar una hoja de estroboscopia sobre el plato, desplazar el brazo sonoro hacia el lado del plato, y girar el plato.
3. Ajustar las resistencias semifijas VR1 y VR2 del conjunto del motor de modo que el strobo de la hoja de estroboscopia aparezca fijo.
4. Ajustar la resistencia VR2 para 33 1/3 rpm, y la VR1, para 45 rpm.

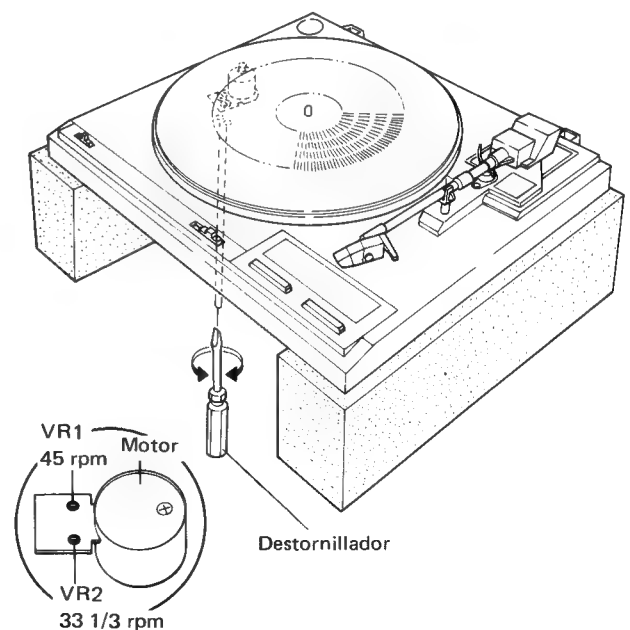


Fig. 10-3 Ajuste del motor

11. PRECAUTIONS FOR REASSEMBLY

Follow these directions and precautions when reassembling a unit after completing repairs. Be sure to lubricate as required, make no mistakes when attaching parts, and avoid all other careless mistakes that may be the cause of trouble later on.

11.1 AREAS THAT REQUIRE LUBRICATION

NOTE:

Types of lubricants and areas where they are used are listed in table 1.

Table 1

Type of Oil	Areas used
Silicon Oil #50000	raising shaft
GYA-008	all other areas

Lubrication points are specified for oils other than GYA-008. Never use a different type of oil.

• Cam Section

Apply grease to the heart-shaped grooved section (rear side of the cam) and lock plate sliding section in order to minimize wear on the sliding section and the burden on the mechanism.

• Driving Plate Assembly

Decrease the burden on the mechanism and the wear on the sliding section.

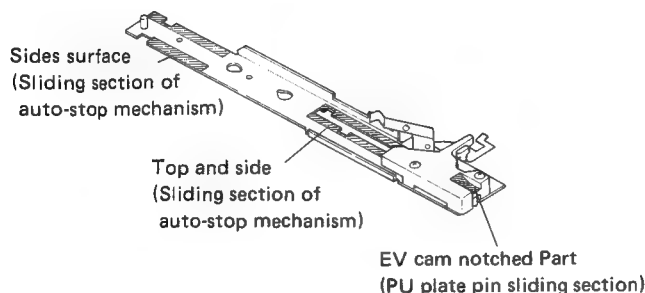


Fig. 11-1 Driving panel assembly section Switch Locker Section

• Switch Locker Section

Apply grease to the switch locker (opening) and sub-panel base sliding section to decrease the burden on the mechanism.

When applying grease to the opening (shaft hole), do not apply any grease 2 ~ 3mm from the bottom surface. If grease is applied 2~3mm within the bottom surface, it may come out the bottom and go between the switch lever and sub-panel base causing the switch lever to operate ineffectively.

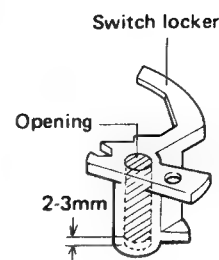


Fig. 11-2 Switch locker section

• Selector Section

Apply grease to the surface of the sub-panel base of the selector sliding section to decrease the burden on the mechanism and wear on the sliding section.

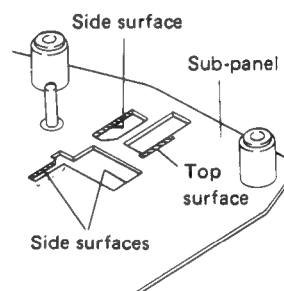


Fig. 11-3 Selector section

• Reset Plate Section

Apply grease to the sub-panel base (shaft) and sliding section of the reset plate to decrease the burden on the mechanism.

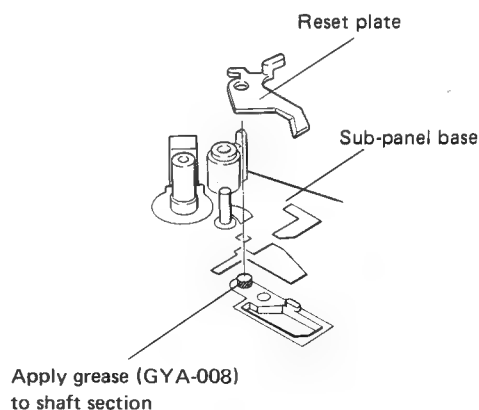


Fig. 11-4 Reset plate section

- **Index Cam Section**

Apply grease to the index cam and lower surface of the hooked section to decrease the burden on the mechanism.

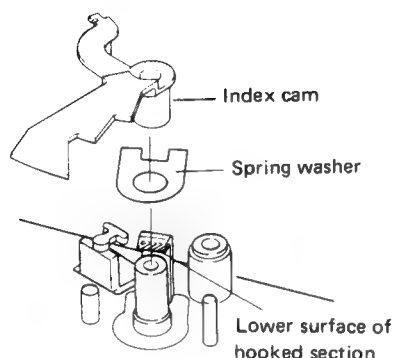


Fig. 11-5 Index cam section

- **EV Sheet Section**

Apply oil to the raising shaft and sliding section of the bearing to assure stability in the elevation lowering speed.

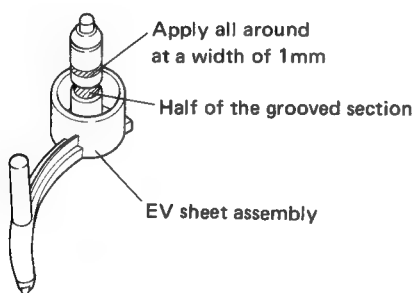


Fig. 11-6 EV sheet section

- **EV Lever Section**

Coat the EV lever shaft section with grease so the EV lever operates smoothly.

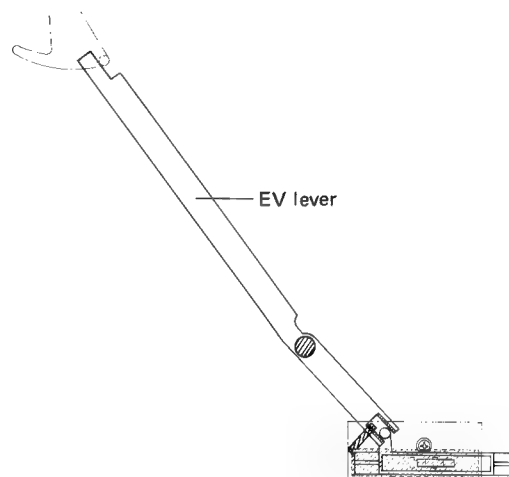


Fig. 11-7 EV lever section

- **Cam section**

Coat the convex side of the cam with grease to prevent cam and timing lever contact section wear.

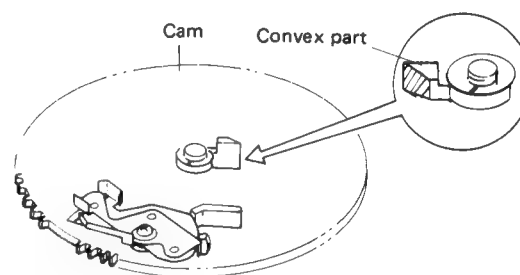


Fig. 11-8 Cam section

11.2 PRECAUTIONS FOR ATTACHMENT OF PARTS AND REASSEMBLY

• Reset Plate SP Attachment

As shown in Fig. 11-9, the reset plate SP hook is attached by putting the open section on the sub-panel base side.

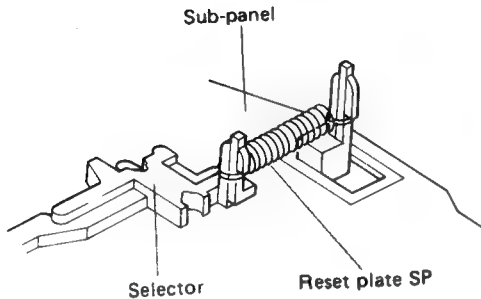


Fig. 11-9 Reset plate SP attachment

• Cam Assembly Attachment

The cam assembly is attached by letting the lock plate go in the direction ① as shown in Fig. 11-10.

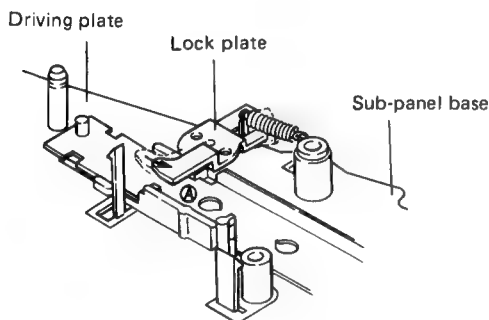


Fig. 11-10 Cam assembly attachment

• Motor Attachment

When installing the motor, set the cam in the mechanism stop location and verify that the starting plate section ② does not protrude beyond surface ① of the cam. If the motor is attached with the starting plate section ② protruding, the starting plate may be deformed, the motor pinion gear may be scratched, and the return function may be damaged.

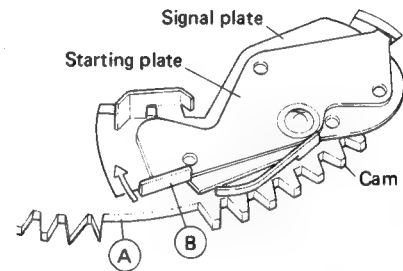


Fig. 11-11 Motor attachment

• Start Lever Unit Attachment

Attach the shaft section of the start lever unit as shown in Fig. 11-12 so that it comes between the reset plate and start plate.

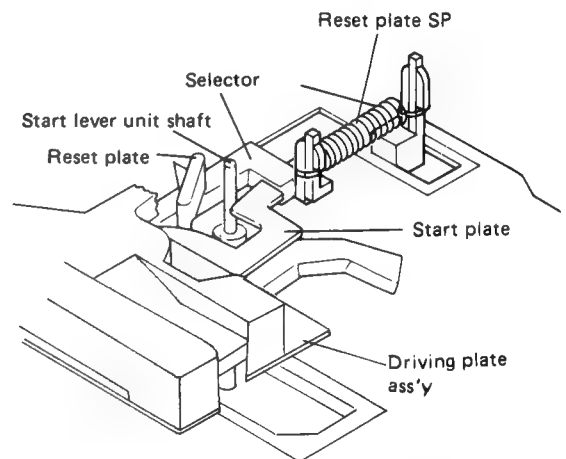


Fig. 11-12 Start lever unit attachment

● Mechanism Ass'y Attachment

1. PU plate shaft position confirmation

When attaching the arm base section to the mechanism section, put the mechanism section switch locker and switch lever in the locked position and verify that the tonearm is in the arm rest location. Also check that the PU plate shaft is in the position shown in Fig. 11-13.

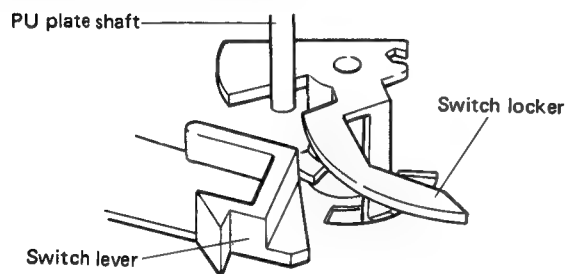


Fig. 11-13 Arm base attachment

● PU Plate Attachment

Push the PU plate into place so that the PU plate bearing section touches the revolution shaft attachment nut. Installation direction is as shown in Fig. 11-15.

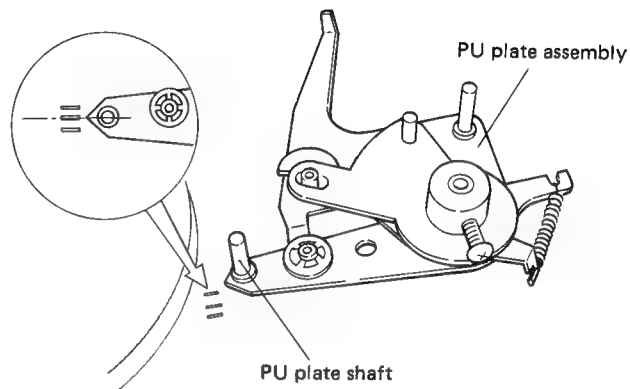


Fig. 11-15 PU plate attachment

2. PU lead wire position confirmation

When attaching the mechanism ass'y to the panel, be careful that the PU lead wire is not pinched at the panel boss as shown in Fig. 11-14.

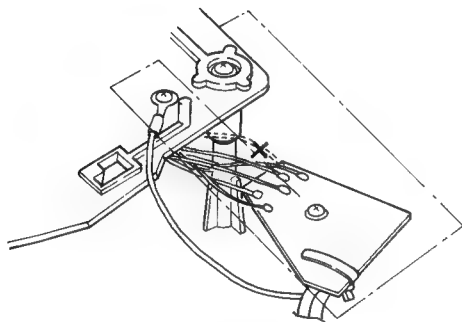


Fig. 11-14 PU lead wire attachment

12. FOR WEM, WB, AND R TYPES

PL-560/R, WEM and WB types are the same as the PL-560/KU type except for following sections.

Contrast of Miscellaneous Parts

Mark	Symbol & Description	Part No.			
		KU type	R type	WEM type	WB type
	Panel (BK)	PNY-337	PNY-374	PNY-337	PNY-337
	Panel (SL)	PNY-338	PNY-375	PNY-338	PNY-338
	PU cord assembly	PXB-345	PXB-333	PXB-333	PXB-333
⚠	AC Power cord	PDG-023	PDG-028	PDG-037	...
⚠	AC Powercord assembly	...	...	...	PDF-212
⚠	Power supply assembly	PWR-080	PWR-083	PWR-082	PWR-082
⚠ ★★	Line voltage selector	...	PSB-011	...	...
	Rubber bush	PEB-114	...	...	...
	Packing case (BK)	PHH-221	PHH-207	PHH-207	PHH-207
	Packing case (SL)	PHH-242	PHH-222	PHH-222	PHH-222
	Operating instruction (English)	PRB-281	PRB-281	...	PRB-281
	(English/German/French/Italian)	...	...	PRE-036	...

Parts list

FOR WEM, WB types

Power supply assembly (PWR-082)

SEMICONDUCTOR

Mark	Symbol & Description	Part No.
★ D1		DSA1A1

FOR R type

Power supply assembly (PWR-083)

SEMICONDUCTOR

Mark	Symbol & Description	Part No.
★ D1		DSA1A1

CAPACITORS

Mark	Symbol & Description	Part No.
	C1, C3	CKDYF103Z50
	C2	CEA221M25L

CAPACITORS

Mark	Symbol & Description	Part No.
	C1, C3	CKDYF103Z50
	C2	CEA221M25L

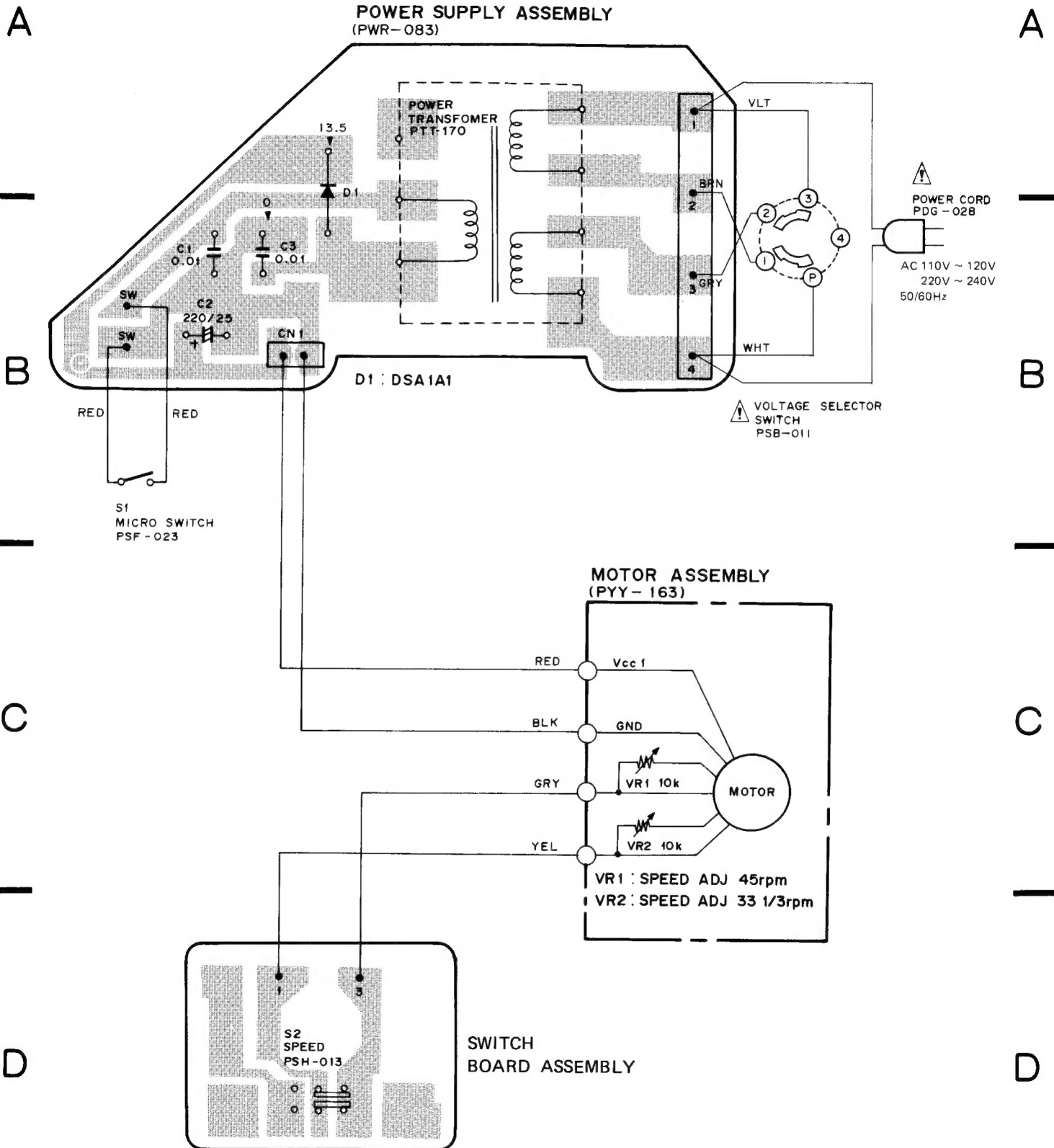
OTHERS

Mark	Symbol & Description	Part No.
⚠ ★	Power transformer (AC 220V ~ 240V)	PTT-169

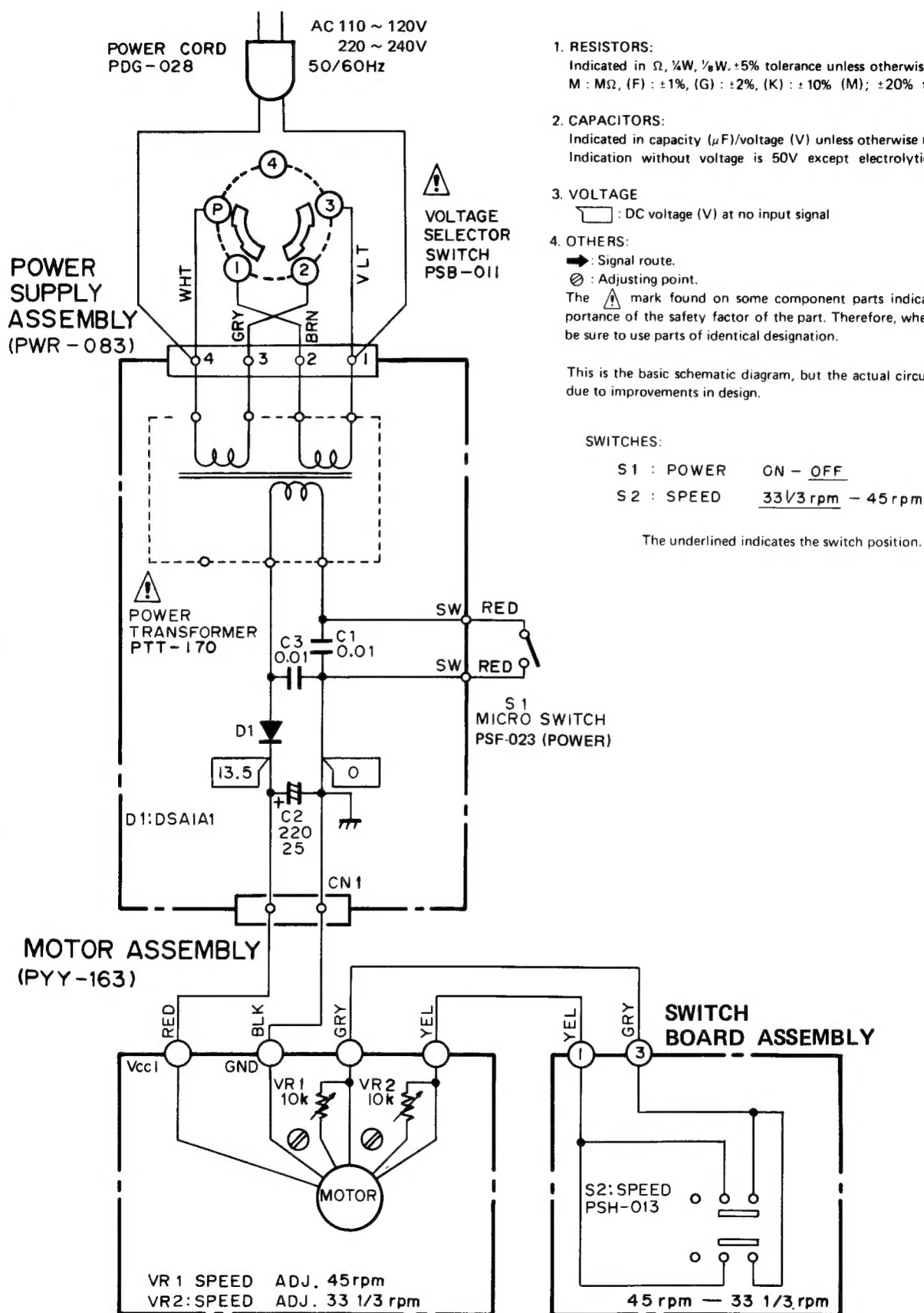
OTHERS

Mark	Symbol & Description	Part No.
⚠ ★	Power transformer AC 110V ~ 120V, AC 220V ~ 240V (Switchable)	PTT-170

P.C. Boards Connection Diagram for R Type



Schematic Diagram for R Type



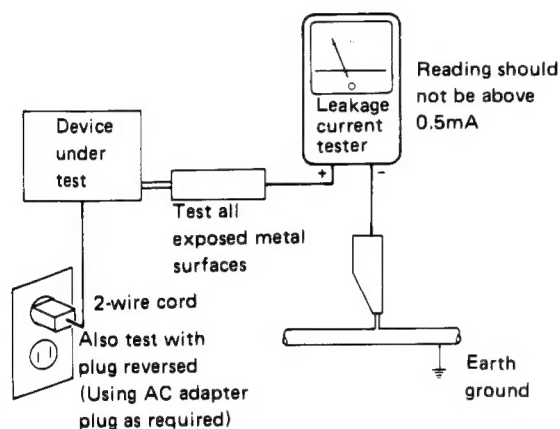
13. SAEFTY INFORMATION

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technical.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a Δ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.